

EXHIBIT 154

REDACTED

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Web - 2020 Product and Business Strategy

SCOPE: This document covers the following product area(s):

- [Ad Manager](#)
- [AdSense for Content](#)

In addition to this doc, please review [Apps](#), [Video](#), and [Cross Platform Strategies](#) for complete view of the business.

GOAL: To provide sales leadership with an understanding of the relevant competitive environment/context and product strategy to inform regional/vertical/channel specific sales strategies.

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2. Google Product Strategy & Value Proposition

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3. 2020 Recommended Go-To-Market/Targets

01. [Drive PG Revenue](#)
02. [Rebrand to Open Bidding](#)
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1. Market Dynamics and Competition

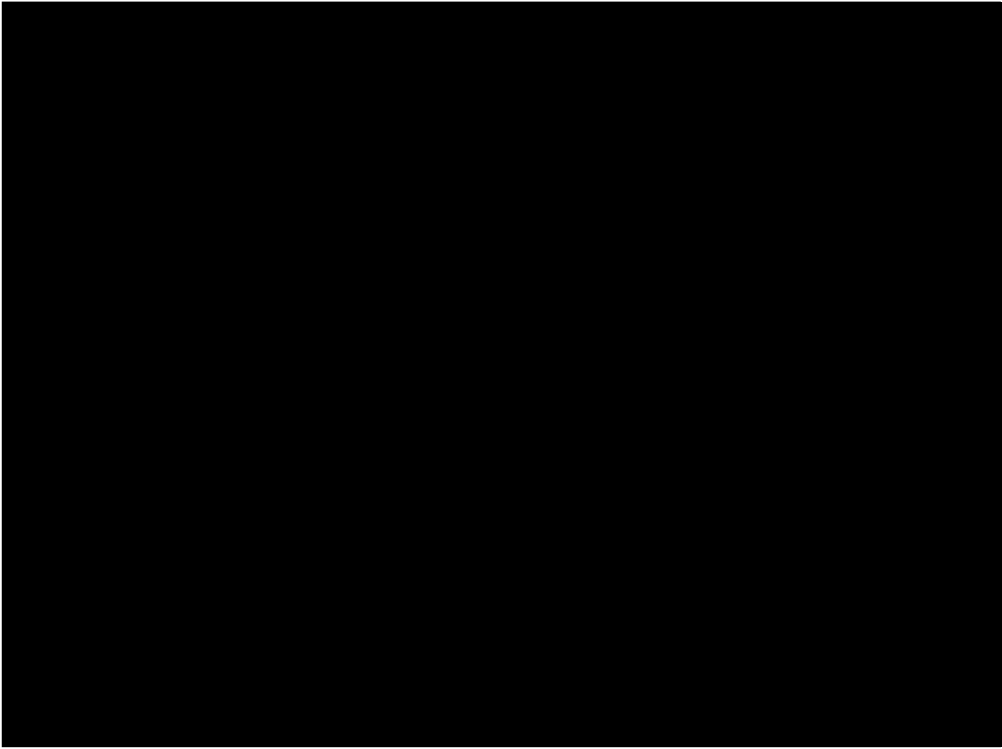
Where we are today, what is changing, and what learnings we've made in 2019?

Market Dynamics - Programmatic

Programmatic Direct

Where we are today:

Our PG business model was initially focused on converting traditional tag spend ([REDACTED]) which is (very) low service cost. Since launch (2+ years ago), the PG Value prop has resonated with some pubs but not all so far. PG growth is [REDACTED] - making it still the fastest growth product at this scale. If we want to broaden the base of pubs and continue growing at this pace, the value prop (and pricing) will likely need to be refined. As the product is still in early stages, we have incurred significant sales & service cost but it has not hindered growth to date and we are expected to be roughly at breakeven by the end of this year.



Programmatic Indirect

[REDACTED]
[REDACTED]
Header Bidding is providing server-to-server or RTB connections to demand sources and providing a programmatic-like solution for publishers thanks to key values trafficked in our ad server. Exchange

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Bidding (see more in [Open Bidding Product Strategy](#)) is our true programmatic alternative for 3rd party indirect demand.

Between Q3 2018 and Q3 2019 we've seen impressions from Header Bidding increase ([REDACTED]) while average price line items remained stable ([REDACTED]). Header Bidding now represents [REDACTED] of remnant impressions (Price Priority, Bulk, Network, House). While Header Bidding does not represent true programmatic transactions it does enable per impression, price-based competition. We expect to see average priced line items to continue to decrease as these migrate to Header Bidding and Exchange Bidding line item types, which will be competing on those transactions.

Market Dynamics - Inventory Acquisition

We have long held the belief that ad servers are sticky and that by 'owning the tag' we would be best positioned to meet the needs of publishers, advertisers, and users more effectively. That theory has worked well for us. However, there are two trends weakening our position.

Trend 1 - "Own the tag" mimics: It's not that owning the tag/SDK is no longer relevant, it's that large and emerging competitors are adopting a similar strategy. More quality inventory is being developed or acquired by large companies that believe they already have valuable proprietary data. User behaviors across content and distribution channels (e.g. cable, telecom) are combined to develop user profiles. Using proprietary ad tech, these companies wall-off content to some extent. If these companies can attract enough users and develop their targeting capabilities, they can begin to establish themselves as a must-buy in the marketplace. If they are able to maximize spend on their O&O inventory, they will attempt to extend advertiser spend off their properties using their ad tech on partner inventory.

We have seen this trend across video (e.g. [REDACTED]), app (e.g. [REDACTED]) and web properties, however video and app will not be covered in this doc. The most recent and threatening examples of this for the web are the acquisitions of Time Warner and AppNexus by AT&T ([POV here](#)). Verizon Media has built or acquired several ad tech solutions (Millennial, Ad.com, Right Media, AdTech) and content destinations (AOL, Yahoo). Other smaller companies have decided to develop their own ad tech such as LinkedIn and eBay (even though their strategy seems to be shifting most recently).

Trend 2 - Circumvention: Publishers now have ways to provide demand partners with fair access to inventory without relying as heavily on Google programmatic services. Historically, only Google sourced demand could compete in real-time on inventory where we owned the tag. Over the last many years, Header Bidding has allowed publishers to facilitate both self competition between demand sources and access unique demand on a per impression basis.

When this circumvention is used, Google loses visibility into the "bid stream" (bidding prices on a per-competitor basis), which are important data pieces of our own optimization.

Most recently, we have observed so called 'hybrid-setups' enjoying increasing popularity among partners (particularly observed in EMEA); hybrid set-up ([example](#)) are Ad Manager integrations into 3rd party Ad Serving stacks, where the primary ad server has some decision logic to control how inventory is allocated to Ad Manager. This adds unnecessary complexity & latency to the partner's ad stack. However, publishers have been claiming the reduced reliance on Google and the lower fees (from 3rd party ad servers) as key advantages over a standard Ad Manager 360 integration - while still accessing full Google demand.

Market Dynamics - Data

Publishers continue to be inundated with more "data" than ever before. Publishers recognize the value of data yet struggle to effectively use it to grow their business.

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Every aspect of a partner business would benefit from sound insights. Pubs are looking to improve their content experience, increase their ad monetization, drive conversions all while making intelligent trade-off decisions between these three drivers. Understanding the data they are able to harvest themselves or obtain through partnerships and applying it is something all pubs are looking to improve upon.

Recent browser changes (ITP/ETP) have impacted the ability for publishers to effectively target against even their 1st party audience data.

Market Dynamics - Transparency

Transparency continues to be paramount as the ecosystem strikes the balance between data-driven solutions (see [Data](#)) and acting as respectful stewards of privacy (see [Evolving Privacy/Regulatory Landscape](#)). The IAB Tech Lab continues to ideate in this space (beyond ads.txt) through preventing and reducing ad fraud in digital advertising by increasing the transparency of every company involved in a programmatic ad transaction.

The latest two initiatives, SupplyChain and Sellers.json, will give advertisers more visibility into all of the parties involved in programmatic transactions, making it harder for fraudsters to game the system and profit from digital advertising. There are two aspects of this new standard:

- **SupplyChain:** Allows advertisers to see everyone involved with offering a bid request for sale, all the way from the publisher to the buy-side platform (e.g., DSP).
- **Sellers.json:** a standard for advertising platforms (e.g., SSPs, exchanges) to publish the identities of the publisher and supply partner accounts that are available on their platforms.

While Google has been involved in the IAB Tech Lab's working group to finalize these two new initiatives, we have concerns about the way the standard will label Exchange Bidding and have proposed alternatives to help resolve those concerns in the next iteration of the spec. Some competitors have used this as an opportunity to position Google as trying to slow down these industry transparency efforts (see [AdExchanger article](#)). For this specific initiative we are actively evaluating the best way to initially implement this initiative and simultaneously evolving it to ensure that our inventory is fairly represented.

Despite the specifics of SupplyChain & Sellers.json, we are supportive of all of these efforts around transparency and will continue to actively engage with the IAB Tech Lab to ensure that our inventory is fairly represented.

Market Dynamics - Continued Shifts in Media Consumption

Time spent by users continues to shift away from desktop/tablet consumption to mobile. Within the mobile world, users are shifting more dramatically to apps over the mobile web.

Google Non-Search Revenue by Product Type

	Q1 2015	Q1 2018	Q1 2019
Web Video			
App Video			
Web Display			
App Display			